Title (en)

Airfoil with hybrid drilled and cutback trailing edge and method of cooling said airfoil

Title (de)

Schaufel mit einer hybrid-gebohrten und geschnittenen Hinterkante sowie Verfahren zur Kühlung der Schaufel

Title (fr)

Aube avec un bord de fuite hybride foré et coupé et procédé de refroidissement d'une telle aube

Publication

EP 2267276 B1 20150624 (EN)

Application

EP 10251168 A 20100628

Priority

US 49266309 A 20090626

Abstract (en)

[origin: EP2267276A2] An apparatus for a gas turbine engine (10) includes an airfoil (26), a metering opening (46) for metering a cooling fluid, a cutback slot (48) configured to deliver the cooling fluid from the metering opening, and a cooling hole (50). The airfoil defines a trailing edge (30), opposite first (32) and second (34) faces, and a mean camber line (42). The cutback slot is defined along the first face of the airfoil adjacent to the trailing edge and offset from the mean camber line of the airfoil. The cooling hole has an outlet (58) that is located at the trailing edge and substantially aligned with the mean camber line of the airfoil. The cooling hole delivers a portion of the cooling fluid from the metering opening.

IPC 8 full level

F01D 5/18 (2006.01)

CPC (source: EP US)

F01D 5/186 (2013.01 - EP US); **F01D 5/187** (2013.01 - EP US); F05D 2230/10 (2013.01 - EP US); F05D 2230/21 (2013.01 - EP US); F05D 2240/122 (2013.01 - EP US); F05D 2240/304 (2013.01 - EP US); F05D 2260/202 (2013.01 - EP US); Y10T 29/49341 (2015.01 - EP US)

Cited by

EP2612994A1; CN103195489A; US11952912B2; US9051842B2; EP2867381B1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

EP 2267276 A2 20101229; **EP 2267276 A3 20140521**; **EP 2267276 B1 20150624**; US 2010329835 A1 20101230; US 9422816 B2 20160823

DOCDB simple family (application)

EP 10251168 A 20100628; US 49266309 A 20090626